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Promoting Electronic Health Record Adoption. Is It the Correct Focus?

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In 2004, President Bush set as a goal that every American would have an electronic health record by 2014. In the three years since that pronouncement, the Department of Health and Human Services (DHHS) has established the Office of the National Coordinator for Health Information Technology (ONC), and the American Health Information Community (AHIC) to oversee policy. It has set priorities and has anointed two existing organizations, the Health Information Technology Standards Panel (HITSP) and the Certification Commission for Health Information Technology (CCHIT), to play significant roles in establishing and promoting the standards necessary to achieve this goal.

One theme that pervades all of the organizations involved in this broad mandate is the promotion of the adoption of electronic health records (EHRs) by physicians—a perennial issue with which the healthcare informatics community has struggled for several decades. The problem of slow EHR adoption by physicians has been described in the informatics literature as "the wave that never breaks."[1] With the emergence of the national mandate of the current administration to promote the adoption of EHRs, the introduction of legislation in Congress to fund EHR adoption and the focus of some of the 2008 presidential candidates on healthcare IT as a component of their healthcare plans, there is every indication that the wave could finally break before the end of this decade. It is therefore timely to ask if this is in the best interests of the country.

The reason that EHRs are being promoted by this administration and many others is the assumption that they can be useful tools in promoting quality and reducing costs. The premise is that the ready availability of legible patient clinical information to physicians at any place and any time would reduce errors of omission and commission resulting from the lack of such availability in the prevailing paper-based records environment. The addition of clinical decision support functions in many EHRs to alert physicians to potential errors and influence their behav-

iors toward evidence-based decisions further enhances the potential of EHRs to promote quality and reduce costs. All of these positive aspects of EHRs have been widely documented over several decades in the broad healthcare informatics literature and particularly in JAMIA. These will not be reviewed here.

The focus of this commentary is to question whether the current policy of promoting EHR adoption is appropriate given the current state of EHRs in the marketplace and the financial incentives currently in place to adopt them. There are some very troubling trends that have emerged in recent years that would suggest that this policy, if not modified, may backfire with regard to quality and costs.

The current financial incentives to physicians to adopt EHRs are misaligned regarding the cost side of the equation.[2] If, indeed, one of the benefits of EHRs is to reduce overall healthcare costs, those benefits largely accrue to the buyers of healthcare and not the providers, yet the providers currently pay for the systems. Therefore, in today's environment, there is a financial disincentive for physicians to adopt EHRs for the purpose of healthcare cost reduction. If one couples that disincentive with the administrative and workflow disruption that the introduction of an EHR has on a medical practice at least initially, one understands why the vendors of EHRs have had to promote other features to provider organizations to convince them to purchase their products. It is these other features which have the consequence of undermining the fundamental value proposition of EHRs.

What are these other features that entice physicians to buy an EHR? They are:

1. Improved revenue from higher Evaluation and Management (E&M) codes.
2. Time saving devices for physician documentation.

From a physician's point of view, these are both positive reasons to purchase an EHR and help overcome the financial disincentives that otherwise exist. Unfortunately, increasing the E&M codes increases overall healthcare costs rather than decreases them. It is not known whether this increase represents a correction of previous under-coding of the E&M code as some argue, or a form

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of "E&M code creep." Regardless, the costs increase. One could argue that if the use of these EHRs reduces overall healthcare costs in other ways and/or measurably increases healthcare quality, an increase in E&M code payments could be justified. The problem is that the features introduced to enhance E&M codes and save documentation time are not the same features that improve quality or reduce overall healthcare costs. In fact, they are features that potentially degrade quality.

The biggest problem EHR vendors have faced with physician adoption is that they slow physicians down, at least initially. The fact that they might improve quality is not a sufficient inducement to a physician to use an EHR if his or her overall productivity (and therefore income) declines in the process. In documenting an encounter note, it is difficult to beat the speed of a physician dictating that note by any computer-based input mechanism except through the use of default templates and/or copying previous notes. Both of these mechanisms can greatly increase the speed of documentation by a physician. Using a single click of a mouse to enter, "The chest expansion is normal and symmetrical. There is no dullness to percussion. Both diaphragms move adequately. There are no rales, rhonchi, wheezes, egophony nor whispered pectoriloquy." is certainly faster than dictating the same information and it certainly qualifies as adequate documentation of the chest exam for the E&M code. Faster yet is a single click for the entire physical exam or even more complete notes which can be done in some systems. With regard to the copy/paste feature, if one is following a patient that is relatively stable and has had little or no change from the previous visit, it is certainly faster to copy and perhaps make minor edits to a previous note than to re-create one. These two mechanisms (defaults and copy/paste) have become widespread in EHR products and raise the question whether adoption of EHRs, in their present form, should be promoted.

There have been no studies yet published that scientifically measure the quality of documentation of EHRs with these time-saving features. However, there is mistrust of EHRs produced in this manner. Computer print-outs of encounter notes with complete reviews of systems and physical exams with dozens of normal negatives neatly documented are largely discounted by the physicians who receive them. An article published recently in the Sacramento Bee newspaper illustrates the problem. It describes a conversation between two physicians in which the first physician, in commenting on the progress note produced by the second physician says, "Wow, that's a very thorough note. You completed that entire exam and asked all those questions in 15 minutes?" The second physician responded, "Not really. It was entered by an electronic template." The article concludes that such practices "may hinder care and could lead to major problems."[3] A recent article in JAMA on the problem of the use of copy/paste has a similar theme.[4] These are admittedly anecdotal examples and not proof that the EHRs with these features reduce quality. However, if one understands how physicians work and how these EHRs function, it is easy to understand how inaccurate documentation can become a part of the most well-intentioned physician's practices. Physicians are generally rushed when seeing patients. That is why they seek time-saving devices in the first place. Default

notes and copying previous notes are helpful in saving time. But editing a default note or a copied note that is not quite applicable to the current visit is time-consuming in any system. Even proof-reading them is a distraction when a physician is in a hurry. It is understandable that in the course of click-producing many notes a day, there may be insufficient time to read and edit out one or two aspects of the default or copied history or physical that are not accurate or might not have been asked or performed at the current encounter. Either this editing simply is not done, or sometimes the physician will dictate or type a supplemental free-text portion of the note with the correct information creating an inconsistency in the final note. Unfortunately because physicians are paid on the basis of what they document, the defaults built into most systems tend to be the maximum documentation of what they normally do rather than the minimum. These notes do increase the E&M code value and therefore the revenue of the physician and they do save physician documentation time. However if, as it seems likely, they are not always accurate reflections of the encounter, they have delivered a serious blow to the quality of documentation and, one can argue, quality of care as well. Even though there are other quality benefits of these systems, this cannot justify the acceptance of degraded and potentially misleading documentation. Further, if other physicians discount all or some of these notes as untrustworthy, what purpose do they serve other than as documents to support claims? One should not be surprised when we see articles, such as the recent publication in the Archives of Internal Medicine, indicating a lack of evidence that EHRs improve quality.[5]

There is one other potentially ominous aspect to EHRs that also must be considered. Under a contract from ONC, a group of experts was commissioned in 2005 to examine the issue of healthcare fraud as it relates to information technology. The report[6] from this effort highlighted the huge cost problem which fraud currently represents ($51B to $170B in 2003). More significantly, the report warned that unless specific measures are taken, the opportunity for fraud greatly increases as the healthcare system becomes increasingly electronic. Among the 10 "guiding principles" recommended in this initial report was the following:

> "EHR standards must define requirements to promote fraud management and limit opportunities for fraud and abuse."

In 2006, as a part of a second contract issued by ONC,[7] another group of experts was commissioned to recommend an initial set of such requirements. The expert panel acknowledged that only a very small minority of physicians commit fraud and attempted to define recommendations that not only would help in fraud management, but also help to promote better documentation practices for all physicians using EHRs. A draft of these requirements was made available for public comment and the final set of recommended requirements is currently under review by both HITSP and CCHIT. Although the outcome of this process will not be known for some time, the prospects are uncertain for widespread incorporation of the recommended fraud management functions into commercial EHRs. These recommended functions largely relate to increased audit capability of the "who, what, when, how, and why" of documentation of and access to clinical information.

Judging from the initial informal feedback from some members of HITSP and CCHIT and public commentary from physician organizations regarding the report, attempting to build in fraud management functions would be perceived as threatening to physicians and/or could add undesired cost increases for EHR systems. If either is true, EHR adoption would be inhibited by these functions—just the opposite of what these organizations are mandated to do and certainly not in the vendors' interests.

The current policy of promoting adoption of EHRs requires some re-thinking. Adoption, per se, is not the goal. We must focus, in addition, on correcting the problems in EHRs and more importantly, on the financial environment which underlies those problems. DHHS, ONC, AHIC and the entire informatics community need to re-focus their priorities on promoting EHRs that enhance quality, cost reduction and fraud management even at the risk of delaying adoption.

References ■

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